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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/775,012	01/31/2001	John F. McEntee	10004029-1	7500

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AGILENT TECHNOLOGIES
Legal Department, 51U-PD
Intellectual Property Administration
P. O. Box 58043
Santa Clara, CA 95052-8043

EXAMINER

HANDY, DWAYNE K

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 08/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/775,012

Applicant(s)
McEntee

Examiner
Dwayne K. Handy

Art Unit
1743



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the amendment/arguments filed 4/14/03
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 29-32 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-11, 13, 14, and 18 is/are rejected.
- 7) ☒ Claim(s) 3, 12, 15-17, 19-22, and 29-32 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17:2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 10-22 were previously rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection has been removed. The Examiner thanks applicant for the detailed description of the device.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1, 2, 4-11, 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Besemer et al. (5,945,334). A rejection using this reference was previously made under U.S.C. 102 on claims 1, 2 and 4-9. The rejection now has been rewritten as a 103 rejection in light of applicant's submitted arguments which further explained the device to the examiner.

The new rejection includes claims 10, 11 and 13 as well. Besemer et al. teaches an apparatus for packaging a chip. The basic embodiment of the device contains a cavity for mounting a chip and containing solution between the chip and a bottom surface of the device. The device is best shown in Figures 4-7 and described starting in column 6. From column 6, line 34: "Package (300) contains a cavity (310) on which a chip is mounted. The package includes inlets/outlets (350, 360) which communicate with cavity (310). Fluids are circulated through the cavity via the inlets/outlets (350 and 360). Figure 6 shows a side view of on embodiment without the cover piece (420). It shows the chip resting in the

It is the position of the Examiner that the features he has cited meet the limitations of claim 1.

The inlet and outlet elements (350, 360) correspond to a "first and second collection region".

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The space (310) between the chip bottom and the holder (410) corresponds to the solution chamber. Finally, the unlabeled bottom surface of the solution chamber would provide a solution return surface across which solution flows. The cover element shown in Figures 4 and 5 meets the limitation of a “cover strip”. This cover strip also provides a surface on which the solution can flow. Besemer teaches a wide variety of substrates which may be placed into their holder in column 4 and includes microarrays. Besemer, as described above, does NOT teach a solution chamber in which solution is held within the chamber by capillary action. Besemer is silent as to the spacing between the holder elements and the substrate in the embodiment described above. In another embodiment described in column 11, however, Besemer discloses a 0.07 inch depth for the holder. While this teaching does specifically cite this distance as “capillary spacing”, the Examiner believes it would have been obvious to one of ordinary skill in the art to provide capillary spacing between the substrate and a holder surface. The use of capillary spacing would ensure that contact time between the substrate and fluid while in the chip holder is maximized since the fluid would HAVE to touch the substrate anytime it is held in the holder with the solution.

Response to Arguments

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6. Applicant's arguments filed 4/17/03 have been fully considered and while they are persuasive in arguing against the Examiner's 102 rejection involving Bessemer. Applicant's arguments were successful in overcoming the rejection of claim 3, however.

In traversing the rejection made by the Examiner involving the reference Bessemer, applicant has argued that Bessemer cannot anticipate the claims since Bessemer is not a roll pump and does not contain the same features of the instant application. The Examiner agrees that the reference does not specifically recite a chamber in which a solution is held by capillary action, but believes the reference does teach the other features recited in the claims.

In claims 1 and 10, applicant has broadly claimed the device. While the Examiner recognizes his duty to read the claims in light of the specification, the Examiner is also obliged to interpret the claims as broadly as possible. In claim 1, applicant has basically claimed a chamber with a surface, connected to two regions. The regions have no claimed structural aspect which the Examiner can determine past an ability to have fluid flowing on them. That is, applicant has placed no structure in the claim language to distinguish these features. When given a broad interpretation as the Examiner described before, claim 10 may be interpreted much the same way.

Claim 10 claims a device comprised of a first well in the reaction chamber and two gaps. In claim 10, applicant has provided some structural definition to these features, but any limitation based on the axis of rotation or how fluid flows through these elements do not carry patentable weight.

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This brings the Examiner back to the reference Bessemer. The Examiner realizes, of course, that Bessemer teaches a chip holder and not a roll pump. But the chip holder of Bessemer appears to contain the same broadly claimed features as applicant has in the rejected claims. For example, in Figure 6, Bessemer shows an embodiment in which a substrate is held over a gap and borders two smaller gaps which hold liquid on each side of substrate. The addition of a cover and feed wells would then meet the limitations of the rejected claims. Again, claim 1 recites two regions for collecting solution, a chamber for enclosing the entire device, and a solution return surface (this would be the cover). Now, the Examiner fully understands that the device of Bessemer is not intended to be rolled in the manner that applicant's device will be during use, but that still does not change the fact that Bessemer appears to contain the broadly claimed features of claims 1, 2, 4-11, 13 and 18 including the surfaces, gaps, and wells claimed therein. The Examiner altered the original rejection in response to applicant's arguments based on the capillary spacing however, so these claims are now rejected under U.S.C. 103(a)

Allowable Subject Matter

7. Claims 3, 12, 15-17, 19-22 and 29-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


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Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwayne K. Handy whose telephone number is (703)-305-0211. The examiner can normally be reached on Monday-Friday from 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden, can be reached on (703)-308-4037. The fax phone number for the organization where this application or proceeding is assigned is (703)-772-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0661.


Jill Warden
Supervisory Patent Examiner
Technology Center 1700

dkh

August 5, 2003